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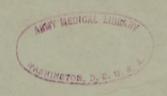
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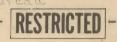
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# OFFICE OF THE PROVOST MARSHAL GENERAL



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CONTROL DIVISION, S.G. U. 2 4 JAN 1940



#### ACCIDENT PREVENTION PROGRAM

INJURY RATES, MILITARY PERSONNEL, DECEMBER AND YEAR 1945

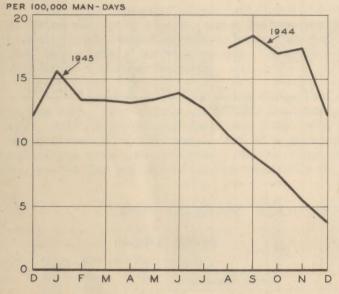
In December 1/ the injury 2/ rate for U. S. Army personnel at Class I, II, and IV installations assigned for safety supervision to the service commanders and Chiefs of Transportation, Ordnance, and Chemical Warfare was 3.8 injuries per 100,000 man-days 3/. The November rate was 5.6; the 12-month 1945 cumulative rate was 11.0.

Due to the lack of complete 1944 data and the many necessary revisions made in military reporting procedures, no equitable comparison can be made between 1944 and 1945. During the year 1945, however, two noteworthy trends have developed (a) a steady decline in rates since July and (b) a sharp increase since July in the percentage of accidents occurring to personnel while off post on an unassigned activity (on pass, leave, furlough, or AWOL). The former has become more evident each month since V-J day and is attributable in a large measure to a lessening in hazardous types of training; the latter to the influx of large numbers of returnees from oversea theaters who are placed on leave or furlough immediately after the initial 24-hour processing.

During the first half of the year, personnel on pass, leave, furlough, or AWOL were accounting for not over two of each 10 casualties in the United States. By October the ratio had almost doubled. There is, however, a wide variance in this ratio among the several personnel classifications. Personnel in training, with relatively less free time, had an "off post unassigned activity" ratio of 2 in 10, whereas overhead, station complement, and miscellaneous personnel are experiencing almost 50 percent of their accidents while on pass, leave, furlough, or AWOL.

## ACCIDENT EXPERIENCE: ALL MILITARY PERSONNEL (EXCEPT PWs) AT ASF INSTALLATIONS

INJURY RATES: TOTAL INJURIES



| Reporting  |  | Inju                                      | ries   | Percen   | Ra   | 1   |   |
|--|--|---|--|--|--|---|---|
| Agency   | Total<br>Man-days<br>(000)   | Non-<br>Fatal Fatal                       |  | On Post, and<br>Off Post on<br>Asgd Activity             | Off Post<br>On Unasgd<br>Activity                        | Dec   | 1945  |
| TOTAL .  | 45,088   | 33  | 1,687  | 65   | 35   | 3.8   | 11.0  |
| OD   | 482  | 1   | 17   | 56   | 44   | 3.7   | 14.0  |
| CWS  | 52   | 0   | 4  | 75   | 25   | 7.7   | 18.3  |
| TC   | 5,760  | 7   | 221  | 57   | 43   | 4.0   | 9.7   |
| SvC  | 38,794   | 25  | 1,445  | 66   | 34   | 3.8   | 11.0  |
| First Second Third Fourth Fifth Sixth Seventh Eighth Ninth MDW | 1,997<br>3,346<br>4,317<br>7,421<br>3,541<br>3,905<br>3,605<br>5,638<br>3,730<br>1,294 | 0<br>2<br>2<br>7<br>3<br>1<br>4<br>6<br>0 | 54<br>78<br>119<br>365<br>134<br>91<br>142<br>277<br>136<br>49 | 61<br>65<br>58<br>71<br>75<br>49<br>67<br>69<br>64<br>55 | 39<br>35<br>42<br>29<br>25<br>51<br>33<br>31<br>36<br>45 | 2.7<br>2.4<br>2.8<br>5.0<br>3.9<br>2.4<br>4.0<br>5.6<br>3.8 | 6.5<br>6.7<br>7.1<br>14.8<br>8.2<br>5.7<br>8.8<br>14.4<br>11.2<br>7.7 |

a/ Rate is based on all injuries on and off post.

The chart and table above show the military casualty-rate trend computed for all on and off post injuries while the remainder of this study concerns only injuries while on post or when on assigned activity off post, as such injuries are more effectively controlled.

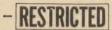
1/ All data computed in accordance with changed criteria pursuant to ASF Circular 428, 1945.
2/ Reportable military injuries comprise those resulting in death, hospitalization, or excuse from duty beyond 2400 on day of injury. Injuries are classified as to whether they are sustained (1) on post or on assigned activity off post, or (2) off post while on leave, pass, furlough, or AWOL. Injuries are charged to the installation to which the injured is assigned or attached regardless of where or when the accident occurs. Reporting parallels safety responsibility, - service commands report accidents to military personnel at installations assigned to them for safety supervision and the technical services do likewise.
3/ This formula is similar to that in use for computing civilian rates except that it uses

man-days instead of man-hours because the military (and PWs) are on a 24-hour duty basis.

To permit of equitable comparisons, all rates have been adjusted on this basis.

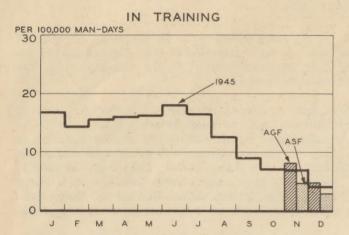
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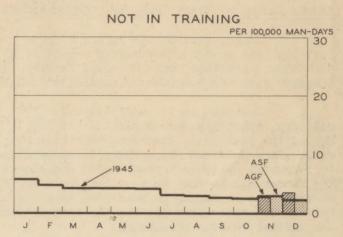
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#### INJURY RATES FOR MILITARY PERSONNEL

ACCIDENTS ON POST AND ON ASSIGNED ACTIVITY OFF POST





ACCIDENT EXPERIENCE: ALL MILITARY PERSONNEL (EXCEPT PWs) AT ASF INSTALLATIONS
(Accidents on post and on assigned activity off post)

| Reporting  | Grand Total  |   |  |  |                   |   | In Training Tot                                   | Station  | Comp. b/& Overt   | LIBL  | P.   | discellaneous To                                   | DEBT G   | 1   |  |  |                                      |     |   |      |
|--|--|---|--|--|-------------------|---|---|--|---|---|--|--|--|---|--|--|--------------------------------------|-----|---|------|
|  | Total  | Injuries  | In;  | jury r   | ate               | Total   | Injuries  | Inj  | ury r   | ate   | Total  | Injuries   | ate  | Total   | Injury rate  |  |                                      |     |   |      |
| Man-days Of  | On Post and<br>Off Post on<br>Asgd Activity  | Dec   | Nov  | 1945   | Man-days<br>(000) | On Post and<br>Off Post on<br>Asgd Activity   | Dec   | Nov  | 1945  | Man-days<br>(000)   | On Post and<br>Off Post on<br>Asgd Activity  | Dec  | Nov  | 1945  | Man-days<br>(000)                                    | On Post and<br>Off Post on<br>Asgd Activity                        | Dec                                  | Nov | 1945  |      |
| TOTAL  | 45,088   | 1,116   | 2.5  | 3.7  | 9.0               | 13,142  | 553   | 4.2  | 6.4   | 13.2  | 21,658   | 479  | 2.2  | 2.7   | 3.3  | 10,288   | 84                                   | 0.8 | 1.2   | 9/   |
| Ordnance   | 482  | 10  | 2.1  | 5.2  | 9.2               | 279   | 0   | 0.0  | 5.6   | 3.1   | 203  | 10   | 4.9  | 4.6   | 4.7  | 1  | 10 F F                               | -   | -   | F-33 |
| Chemical Warfare   | 52   | 3   | 5.7  | 7.7  | 14.5              | 3   | .0  | 0.0  | 23.1  | 13.4  | 49   | 3  | 6.1  | 7.2   | 6.9  | <u>f</u> /   |                                      | -   | -   |      |
| Transportation   | 5,760  | 130   | 2.3  | 2.7  | 5.8               | 133   | 20  | 15.1   | 30.6  | 21.7  | 2,163  | 85   | 3.9  | 3.4   | 3.7  | 3,464  | 25                                   | 0.7 | 1.3   |      |
| Service Commands   | 38,794   | 973   | 2.5  | 3.9  | 8.1               | 12,727  | 533   | 4.2  | 6.2   | 13.2  | 19,243   | 381  | 2.0  | 2.6   | 3.3  | 6,824  | 59                                   | 0.9 | 1.0   |      |
| First Second Third Fourth Fifth Sixth Seventh Bighth Ninth MDW | 1,997 3,346 4,317 7,421 3,541 3,905 3,605 5,638 3,730 1,294                          | 33<br>52<br>70<br>263<br>103<br>45<br>98<br>195<br>87<br>27 | 1.7<br>1.6<br>1.6<br>3.5<br>2.9<br>1.2<br>2.7<br>3.5<br>2.3<br>2.1 | 1.8<br>3.5<br>1.8<br>5.5<br>3.0<br>1.9<br>3.8<br>5.2<br>4.0<br>2.2 | 7.2               | 210<br>294<br>1,109<br>3,503<br>1,287<br>56<br>1,434<br>3,071<br>1,370<br>392                 | 2<br>2<br>38<br>182<br>65<br>2<br>67<br>125<br>38 | 1.0<br>0.7<br>3.4<br>5.2<br>5.1<br>3.6<br>4.7<br>4.1<br>2.8<br>3.1 | 8.8<br>2.7<br>2.9<br>8.9<br>7.2<br>4.9<br>7.2<br>4.9<br>7.2         | 7.8<br>7.4<br>5.0<br>17.3<br>9.5<br>5.4<br>16.0<br>9.9<br>7.4 | 1,654  | 23<br>50<br>24<br>76<br>38<br>24<br>29<br>70<br>34 | 2.6<br>1.6<br>1.5<br>2.3<br>1.7<br>1.3<br>2.2<br>2.7<br>2.3<br>1.6 |   | 3.9<br>3.5<br>3.3<br>2.1<br>2.0<br>4.1<br>4.0<br>4.2 | 903<br>f/<br>1,553<br>615<br>f/<br>1,981<br>825<br>h/<br>867<br>80 | 8<br>-0<br>5<br>-19<br>2<br>-15<br>2 | 0.9 | 0.9<br>0.5<br>4.0<br>1.2<br>0.3<br>0.9<br>h/<br>2.1 |      |
| Personnel Cont.  |  | AGF Total   |  |  |                   |   | AGF in Traini                                     | ng   |   |   |  | AGF Overhee  | ıd   |   |  |  |                                      |     | 7   |      |
| TOTAL  | 10,601   | 479   | 4.5  | 6.4  | e/                | 8,738   | 422   | 4.8  | 7.9   | e/  | 1,863  | 57   | 3.1  | 2.3   | 9/   |  |                                      |     |   |      |
| Ordnance   | g/   | 0   | 0.0  | 0.0  |                   | 1/  | -   | -  | -   |   | <u>s</u> /   | 0  | 0.0  | 0.0   |  |  |                                      |     |   |      |
| Chemical Warfare   | 3  | 2   | 69.2   | 0.0  | 0                 | 1/  | -   | -  | -   |   | 3  | 2  | 69.2   | 0.0   |  |  | ,                                    |     |   |      |
| Transportation   | 重  | -   | -  | -  |                   | 1/  | -   | -  | -   |   | 1  | -  | -  | -   |  |  |                                      |     |   |      |
| Service Commands   | 10,598   | 477   | 4.5  | 6.4  |                   | 8,738   | 422   | 4.8  | 7.9   |   | 1,860  | 55   | 3.0  | 2.3   |  |  |                                      |     |   |      |
| First Second Third Fourth Fifth Sixth Seventh Eighth Minth MDW | 216<br>43<br>493<br>3,647<br>1,239<br>±/<br>365<br>3,533<br>1,062<br><u>h</u> /      | 2<br>14<br>23<br>198<br>62<br>                              | 0.9<br>32.2<br>4.7<br>5.4<br>5.0<br>6.6<br>3.7<br>2.3              | 0.8<br>0.0<br>3.0<br>7.0<br>5.9<br>9.0<br>6.2<br>6.8<br>5.3        |                   | 191<br><u>h</u> /<br>308<br>2,931<br>1,204<br><u>f</u> /<br>243<br>3,015<br>846<br><u>f</u> / | 2<br>16<br>178<br>62<br>21<br>128<br>21           | 1.0<br>5.2<br>6.1<br>5.1<br>8.6<br>4.0<br>2.5                      | 0.0<br>0.0<br>3.7<br>8.7<br>7.5<br>9.3<br>7.0<br>9.6                |   | 25<br>43<br>185<br>716<br>35<br>123<br>517<br>216<br><u>b</u> /                    | 0<br>14<br>7<br>20<br>0<br>3<br>8<br>3             | 0.0<br>32.2<br>3.8<br>2.8<br>0.0<br>2.4<br>1.5<br>1.4              | 0.9<br>0.0<br>2.1<br>2.6<br>0.8<br>7.8<br>2.6<br>1.1<br>5.3 |  |  |                                      |     |   |      |
| Personnel Cont.  |  | ASF Total   | L  |  |                   |   | ASF in Traini                                     | ng   |   |   | , A  | ASF Station Comp                                   | lemen  | it  |  |  |                                      |     |   |      |
| TOTAL  | 24,197   | 553   | 2.3  | 3.2  | e/                | 4,403   | 131   | 3.0  | 4.3   | <u>e</u> /  | 19,794   | 422  | 2.1  | 2.8   | <u>e</u> /   |  |                                      |     |   |      |
| Ordnance   | 481.   | 10  | 2.1  | 5.2  | 1                 | 279   | 0   | 0.0  | 5.6   | -   | 202  | 10   | 5.0  | 4.6   |  |  |                                      |     |   |      |
| Chemical Warfare   | 49   | 1   | 2.0  | 8.1  | 4                 | 3   | 0   | 0.0  |   | 1989  | 46   | 1  | 2.2  | 7.5   |  |  |                                      |     |   |      |
| Transportation   | 2,296  | 105   | 4.6  | 4.6  | 1 7               | 132   | 20  | 15.1   |   |   | 2,163  | - 35   | 3.9  | 3.4   |  |  |                                      |     |   |      |
| Service Commands   | 21,371   | 437   | 2.0  | 3.0  |                   | 3,989   | 111   |  | 3.8   |   | 17,383   | 326  |  | 2.6   |  |  |                                      |     |   |      |
| First Second third Fourth Fifth Sixth Seventh Righth MDW       | 878<br>3,302<br>2,271<br>3,159<br>2,302<br>1,925<br>2,415<br>2,105<br>1,801<br>1,213 | 23<br>38<br>39<br>60<br>41<br>26<br>72<br>65<br>48          | 2.6<br>1.7<br>1.9<br>1.8<br>1.4<br>3.0<br>3.1<br>2.7               | 2.7<br>3.5<br>2.2<br>3.7<br>1.3<br>2.1<br>3.5<br>2.2               |                   | 19<br>294<br>802<br>572<br>82<br>56<br>1,191<br>56<br>525<br>392                              | 2<br>22<br>4<br>3<br>2<br>46<br>3<br>17           | 0.0<br>0.7<br>2.7<br>0.7<br>3.6<br>3.9<br>5.4<br>3.2               | 9.9<br>2.8<br>2.6<br>10.9<br>3.6<br>2.2<br>3.6<br>9.7<br>3.0<br>2.7 |   | 859<br>3,008<br>1,469<br>2,587<br>2,220<br>1,869<br>1,223<br>2,050<br>1,277<br>821 | 23<br>36<br>17<br>56<br>38<br>24<br>26<br>62<br>31 | 2.7<br>1.2<br>2.2<br>1.7<br>1.3<br>2.1<br>3.0<br>2.4               | 2.0<br>3.6<br>2.0<br>3.1<br>1.2<br>2.1<br>2.4<br>3.7<br>3.4 |  |  |                                      |     |   |      |

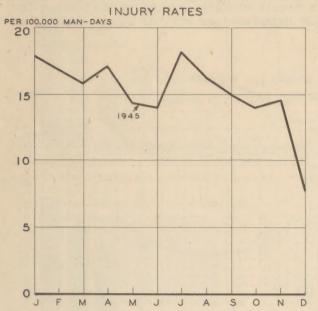
a/ Comprises personnel assigned or attached to ASF or AGF T/O units; personnel assigned as instructors or students at service schools; and instructor personnel and trainees at ASF training centers, at AGF replacement training centers, and in special training units at reception centers. b/ Military personnel assigned to the unit responsible for the operation of a post, camp, or station, and, for purposes of accident reporting, will include patients in general, regional, or station hospitals from the date of their admission. c/ Military personnel responsible for the direction of the operations with which the unit is charged (e.g., clerical, and other administrative personnel). d/ Includes all personnel being processed through staging areas or separation centers; personnel on terminal leave; personnel of detachments or units assigned to ceremonial, town patrol, or similar duties; and all other personnel not specifically included in a, b, or cabove. e/No such breakdown prior to November 1945. f/No personnel in this classification. g/Less than 500 margadays. h/No report in December.





INJURY RATES, PRISONERS OF WAR (INCLUDING ISUS), DECEMBER AND YEAR 1945

# ACCIDENT EXPERIENCE: PRISONERS OF WAR (INCLUDING ISUS) AT ASF INSTALLATIONS



|   |   |   | 1945   |  |   |  |  |  |  |  |
|---|---|---|--|--|---|--|--|--|--|--|
| Reporting<br>Agency   | Total<br>Man-days<br>(000)  | Total<br>in-<br>juries                              | Injury Rate per 100,000 Man-day                                |  |   |  |  |  |  |  |
|   | December  | December  | December   | November   | 1945  |  |  |  |  |  |
| TOTAL   | 8,448   | 647   | 7.7  | 13.8   | 15.2  |  |  |  |  |  |
| OD  | 28  | 7   | 25.0   | 5.9  | 12.7  |  |  |  |  |  |
| TC  | 363   | 21  | 5.8  | 9.7  | 7.9   |  |  |  |  |  |
| CWS   | 8   | 0   | 0.0  | 14.2   | 11.6  |  |  |  |  |  |
| SvC   | 8,050   | 619   | 7.7  | 14.1   | a/ 15.2   |  |  |  |  |  |
| First . Second . Third . Fourth . Fifth . Sixth . Seventh . Eighth . Ninth . MDW b/ . | 370<br>280<br>650<br>1,446<br>533<br>506<br>1,113<br>1,853<br>1,299 | 39<br>22<br>65<br>247<br>36<br>29<br>58<br>63<br>60 | 10.5<br>7.9<br>10.0<br>17.1<br>6.8<br>5.7<br>5.2<br>3.4<br>4.6 | 15.9<br>16.1<br>12.6<br>29.2<br>9.4<br>9.5<br>11.0<br>6.6<br>9.3 | 32.1<br>19.1<br>14.4<br>23.8<br>10.5<br>10.9<br>16.1<br>8.1<br>13.7 |  |  |  |  |  |

a/ PW data included in SvC totals prior to November. b/ No prisoners.

# INJURY RATES, CIVILIAN PERSONNEL, DECEMBER 1945 AND YEARS 1943, 1944, 1945

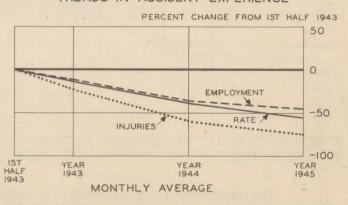
The December\* injury rate of 6.2 disabling injuries per million man-hours worked by civilian employees at ASF installations was up 5 percent from the 5.8 November figure. Both hours of work (exposure) and injuries reached new lows in December; but the decline in injuries was slightly less pronounced. Despite the current rise, however, the rate remained well within the low rate brackets.

December 1945 completed three full years of recorded accident prevention progress in the ASF. The charts below show the steady improvement made during that period. The year 1945, with a 29-percent reduction from 1944, equaled the 1943-1944 decline. More stability was noticeable in 1945 rates, but at a substantially lower level suggesting that maximum rate reductions have been achieved; the mild upturn between August and October reflected a slash in pre-V-J Day employment of approximately 60 percent.

# ASF CIVILIAN ACCIDENT EXPERIENCE, 1943-1945

# RATE PER 1,000,000 HOURS OF EXPOSURE 12 \*YEARLY RATE MONTHLY RATE 4 1943 1944 1945 D J F M A M J J A S O N D 1944 1945

#### TRENDS IN ACCIDENT EXPERIENCE



\* The accident data for December 1945 include all reports (and corrections) received by 10 January 1946. Included in these data are (a) WD civilian employees of Class I, II, and IV installations assigned for safety supervision to the commanding generals of service commands and Chiefs of OD, CWS, CE, and TC; (b) contractor employees on new military construction projects and at OD and CWS installations. Contract stevedores at ports, and civilian employees of OD and CWS assigned privately operated plants, are excluded.



The "percentage change" chart (preceding page) accurately reflects the history of the ASF accident prevention program over the three-year period. Using early 1943 figures as the yardstick, 1943 progress was moderate - this was during the early months when the program was getting underway. Substantially sharper reductions, however, were made during 1944 and 1945 when the program was functioning fully. As a result civilian employees were being injured with far less frequency in 1945 than 1943 - 6.2 injuries per million hours worked, as compared with 12.3.

ARMY SERVICE FORCES ACCIDENT EXPERIENCE, DECEMBER 1945 AND YEARS 1943, 1944, 1945

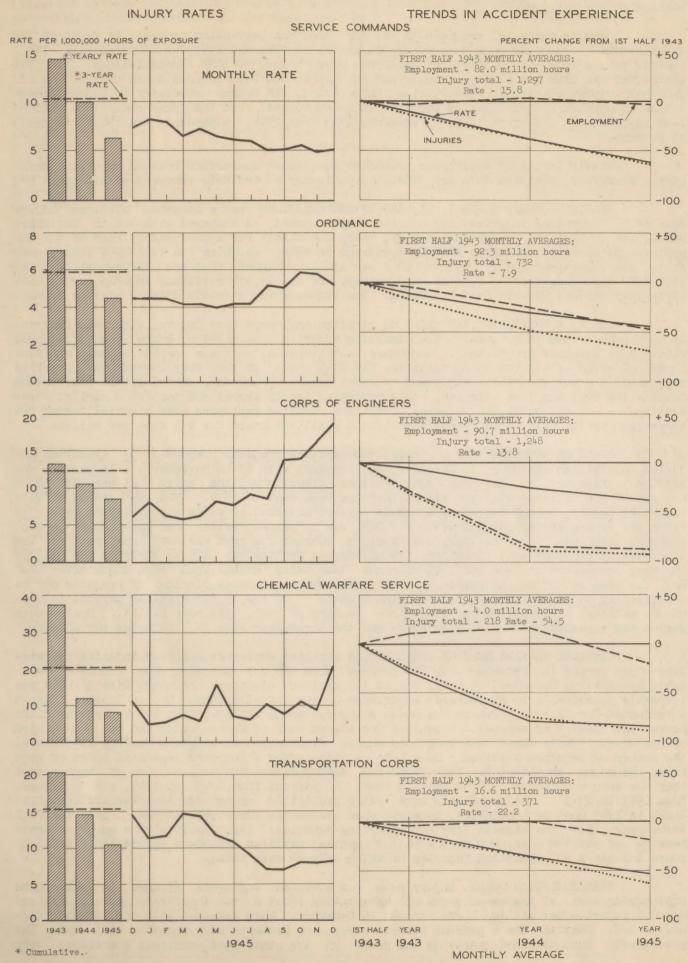
|  | Dec  | 1945  |   | Injury Rate per 1,000,000 Hours                           |  |  |   |  |   |   |   |  |  |   |  |   |  |  |  |
|--|--|---|---|---|--|--|---|--|---|---|---|--|--|---|--|---|--|--|--|
| Reporting Agency   | Employee- Number of Disabling                        |   | All Disabling Injuries a/               |   |  |  |   |  |   |   | Fatalities  |  |  |   |  |   |  |  |  |
| walter and allowed   | Hours<br>Worked<br>(000,000)                         |   | ries                                    | Dec<br>1945   | Year<br>1945   | Year<br>1944   | Year<br>1943  | 3<br>Yrs<br>1943-  |   | ent Ch  |   | Dec<br>1945  |  | Year  | Year   | 3<br>Yrs<br>1943-   | 2011   |  | 1943-                                      |
|  | (000,000)  | ALL   | Fatal                                   | -/-/  | -212   |  |   | 1945   | 1945  |   | 1945  |  |  |   | -  | 1945  | 1945   | 1944   | 1945                                       |
| TOTAL <u>b</u> /   | 80.6   | 493   | 4                                       | 6.1   | 6.2  | 8.7  | 12.3  | 9.6  | - 29  | - 29  | - 50  | 0.05   | 0.08   | 0.09  | 0.13   | 0.10  | - 11   | - 31   | - 38                                       |
| SERVICE COMMANDS   | 55.2   | 278   | 3                                       | 5.0   | 6.2  | 9.8  | 14.2  | 10.1   | - 37  | - 31  | - 56  | 0.05   | 0.02   | 0.04  | 0.04   | 0.03  | - 50   | . 0/   | - 50                                       |
| First Second Third Fourth Fifth Sixth Seventh Eighth Ninth   | 1.9<br>5.7<br>6.5<br>8.2<br>5.9<br>3.9<br>4.9<br>7.7 | 8<br>47<br>28<br>35<br>26<br>19<br>17<br>33<br>40 | 0 0 1 0 0 0 0 0                         | 4.2<br>4.3<br>4.4<br>4.9<br>5.6<br>2<br>5.6<br>2          | 6.56.7<br>5.4.8<br>5.4.0<br>7.0<br>7.0<br>8.4.0<br>7.0<br>8.4.0                | 11.4<br>12.4<br>8.9<br>6.4<br>10.9<br>7.1<br>11.1<br>8.9<br>13.6               | 13.7<br>15.5<br>11.3<br>7.9<br>13.0<br>10.8<br>16.8<br>15.8<br>24.5                     | 11.1<br>12.3<br>8.5<br>6.4<br>9.6<br>8.0<br>10.9<br>10.5<br>15.4                       | - 43<br>- 31<br>- 48<br>- 22<br>- 51<br>- 32<br>- 51<br>- 21<br>- 40                | - 34<br>- 34<br>- 44<br>- 44  | - 45<br>- 59<br>- 37<br>- 59<br>- 56<br>- 68<br>- 56<br>- 67        | 0.00<br>0.15<br>0.00<br>0.17<br>0.26<br>0.00<br>0.00 | 0.03<br>0.00<br>0.03<br>0.06                 | 0.05<br>0.06<br>0.03<br>0.04<br>0.05<br>0.03<br>0.04<br>0.02      | 0.04<br>0.01<br>0.03<br>0.05<br>0.02<br>0.07<br>0.05                         | 0.03<br>0.03<br>0.03<br>0.03<br>0.03<br>0.03<br>0.04                      | <u>a/</u> - 80 - 67 - 33 - 50 - 40 <u>a/</u> - 25 +200 | +150<br>+ 25<br>+500<br>c/<br>- 20<br>+150<br>- 57<br>- 20<br>- 71     | 40<br>- 40<br>- 14                         |
| MDW  | 4.6  | 25  | 0                                       | 5.5   | 6.3  | 7.2  | 15.0  | 6.6  | - 13  |   | - 59  |  |  |   |  |   | <u>e</u> /   | <u>f</u> /   | 到  |
| ORDNANCE   | 12.5   | 65  | 0                                       | 5.2   | 4.5  | 5.5  | 7.1   | 5.9  | - 18  | - 23  |   |  | 0.11   |   |  | 0.09  |  | + 13   |  |
| Field Service Industrial Service   | 6.3  | 28<br>37  | 0                                       | 5.9   | 6.6  | 8.5<br>5.0   | <u>g/</u>   | 8/   | - 20  | g/<br>g/  |   |  | 0.07   |   | 8/   | 8/8   | + 50   | 夏/   | 8/8/                                       |
| ENGINEERS  | 3.0  | 57  | 0                                       | 18.7  | 8.6  | 10.5   | 13.3  | 12.3   | - 18  | - 21  | - 35  | 0.00   | 0.20   | 0.33  | 0.31   | 0.21  | - 39   | + 6  | - 35                                       |
| New England North Atlantic Middle Atlantic South Atlantic Ohio River Great Lakes Upper Mississippi Valley Lower Mississippi Valley h/ Missouri River Southwestern Pacific Northwest 1/ | 0.1<br>0.1<br>0.3<br>0.5<br>0.1<br>0.1<br>0.1<br>0.1 | 0 0 3 2 1 3 15 - 1 5 27 -                         | 0 | 9.8<br>4.2<br>8.0<br>23.6<br>147.0<br>7.5<br>12.5<br>21.7 | 12.1<br>19.9<br>8.6<br>4.9<br>5.1<br>7.4<br>10.9<br>5.5<br>12.8<br>14.6<br>2.7 | 11.2<br>16.7<br>13.2<br>5.9<br>6.5<br>9.2<br>5.4<br>7.1<br>9.2<br>12.7<br>14.8 | 12.1<br>13.8<br>14.9<br>7.8<br>6.7<br>9.1<br>6.6<br>8.3<br>10.9<br>11.8<br>22.0<br>21.3 | 12.4<br>14.7<br>13.5<br>7.2<br>6.3<br>8.8<br>8.2<br>8.3<br>9.5<br>11.6<br>20.0<br>19.3 | + 8<br>+ 19<br>- 35<br>- 19<br>- 22<br>- 20<br>+102<br>- 23<br>+ 39<br>+ 15<br>- 82 | - 7<br>• 21<br>- 11<br>- 24<br>- 3<br>+ 1<br>- 18<br>- 35<br>- 22<br>- 42<br>- 31 | + T4<br>- 42<br>- 38<br>- 22<br>- 19<br>+ 65<br>- 50<br>+ 8<br>- 34 | 0.00<br>0.00<br>0.00<br>0.00<br>0.00<br>0.00         | 0.10   | 0.24<br>0.67<br>0.38<br>0.22<br>0.11<br>0.00<br>-<br>0.15<br>0.49 | 0.24<br>0.24<br>0.31<br>0.26<br>0.28<br>0.63<br>0.00<br>0.29<br>0.25<br>0.44 | 0.23<br>0.28<br>0.30<br>0.22<br>0.19<br>0.45<br>-<br>0.26<br>0.30<br>0.45 | - d/38 d/- 74 - 55 d/9 - 40 d/                         | e/<br>+179<br>+ 23<br>- 15<br>- 61<br>e/<br>- 48<br>+ 96<br>- 9<br>- 3 | - 68<br>- 62<br>d/<br>- 19<br>- 31<br>+ 76 |
| CHEMICAL WARFARE   | 1.0  | 21  | 0                                       | 20.9  | 8.3  | 11.8   | 37.7  | 20.1   | - 30  | - 69  | - 78  | 0.00   | 0.39   | 0.13  | 0.33   | 0.27  | +200   | - 61   | + 18                                       |
| TRANSPORTATION (stevedoring)   | 1.7  | 53  | 1                                       | 31.1  | 46.5   | g/   | g/  | g/   | 8/  | 8/  | 8/  | 0.39   | 0.31   | g/  | <u>B</u> /   | <u>g</u> /  | B/   | 8/   | <u>g</u> /                                 |
| Port A . Port B k/ Port C . Port D . Port E . Port F . Port I . Port J   | 0.2<br>0.1<br>0.2<br>0.1<br>0.4<br>0.5<br>0.2        | 16<br>2<br>4<br>2<br>2<br>15                      | 1 0 0 0 0 0 0 0 0 0                     | 62.7<br>13.7<br>20.9<br>72.0<br>4.9<br>30.0<br>69.6       | 52.4<br>119.4<br>43.9<br>46.3<br>83.4<br>25.5<br>36.6<br>86.1                  |  |   |  |   |   |   | 3.92<br>0.00<br>0.00<br>0.00<br>0.00<br>0.00<br>0.00 | 0.00<br>0.15<br>0.05<br>0.00<br>0.32<br>0.64 |   | R. A.  |   |  |  |  |
| TRANSPORTATION (other)   | 8.9  | 72  | 1                                       | 8.1   | 10.4   | 14.1   | 20.2  | 15.1   | - 26  | - 30  | - 49  | 0.11   | 0.12   | 0.15  | 0.10   | 0.13  | - 20   | + 50   | + 20                                       |
| Port A   | 0.7<br>0.8<br>0.5<br>0.8<br>3.0<br>1.9<br>1.2        | 14<br>3<br>6<br>4<br>12<br>26<br>7                | 0 - 0 0 0 0 0 0 1                       | 3.6<br>11.8<br>5.2<br>3.9<br>13.9<br>6.0                  | 11.8<br>6.9<br>7.1<br>11.6<br>13.7<br>11.5<br>10.4<br>7.1                      | 15.5<br>14.8<br>13.5<br>10.9<br>23.8<br>14.1<br>11.7                           | 20.6<br>19.0<br>18.2<br>10.5<br>17.7<br>21.5<br>18.0<br>28.9                            | 16.1<br>15.3<br>13.8<br>11.1<br>19.5<br>15.7<br>13.7<br>15.3                           | - 24<br>- 53<br>- 47<br>+ 6<br>- 42<br>- 18<br>- 11<br>- 39                         | - 23<br>- 22<br>- 26<br>+ 4<br>+ 34<br>- 35<br>- 60                               | - 63<br>- 61<br>+ 10<br>- 23<br>- 49<br>- 42                        | 0.00<br>0.00<br>0.00<br>0.00                         | 0.28   | 0.00<br>0.16<br>0.00<br>0.27<br>0.14<br>0.19                      | 0.12<br>0.04<br>0.00<br>0.00<br>0.17<br>0.03                                 | 0.16<br>0.08<br>0.05<br>0.19<br>0.15<br>0.09                              | - 63<br>- 4<br>- 84<br>- 33                            | - 36<br>e/<br>+300<br>e/<br>£/<br>- 18<br>+533<br>+ 85                 | - 12<br>- 12                               |

a/ Includes fatal accidents. b/ Excludes stevedoring. c/ No change. d/ No fatalities reported in 1945. e/ No fatalities reported in 1944. f/ No fatalities reported in 1943. g/ Incomplete data; no data. h/ Inactivated after 1943. i/ No December report. j/ Includes Ports G and H. k/ Inactivated in October.

The various supply programs reached their peaks during this period; while some were mounting others were tapering off. Despite this acceleration and deceleration of operations - always conducive to adverse accident experience - the number of disabling injuries was being steadily reduced and at a rate faster than the annual dips in the employment curve (based on early 1943 figures).

During the three years 1943, 1944, and 1945, civilian employees at ASF installations worked in excess of 7 billion hours and suffered a total of 68,974 disabling injuries, or 9.6 per million hours of work. The 50-percent 1943-1945 reduction in the ASF injury rate repre-

# CIVILIAN ACCIDENT EXPERIENCE, BY AGENCY



sented a drop from 37,587 injuries to 11,961. Hours of work declined from 3 billions to 19 billion in the interim.

Another index of progress in the ASF accident prevention program is found in the substantially lower number of work-connected deaths in 1944 and 1945, as compared with 1943. In that year a total of 402 civilian employees were killed at ASF installations. In 1944 this total had been cut exactly in half and in 1945 it had been reduced again to 155. As employment (exposure) also declined during this period, it became necessary to convert these totals into rates (fatal injuries per million hours worked) but the rate reductions were no less impressive - 1944 from 1943, 31 percent, 1945 from 1944, 11 percent, and 1945 from 1943, 38 percent.

Dissimilarity of activities precludes equitable comparison between reporting agencies. Therefore, accident data are offered principally to indicate progress within agencies.

SERVICE COMMAND CLASS I, II, AND IV INSTALLATIONS had a December civilian injury rate of 5.0 disabling injuries per million hours worked, as compared with 4.8 in November. During all of 1945 this reporting agency, which accounted for approximately half of the ASF employment, showed a continued healthy downtrend in rate, matching its 1943-1944 experience. While the three-year injury rate of 10.1 was slightly higher than the ASF composite, the 1943-1945 improvement of 56 percent was greater. Of the 29,332 civilians injured during this three-year period, 99 were fatal injuries. The exposure was slightly under 3 billion hours.

ORDNANCE DEPARTMENT INSTALLATION civilian employees were injured with less frequency in December than in November - 5.2 disabling injuries per million hours worked compared with 5.8 in November (corrected). Ordnance installations, with the second highest exposure (hours of work) of all reporting agencies, had 1945 rates in the very lowest rate brackets and, until V-J Day when their employment was cut almost 75 percent, showed little fluctuation. Despite low 1943 and 1944 figures, this reporting agency showed substantial annual rate reductions. A total of 14,806 Ordnance Department civilian employees were disabled during the three-year period (218 fatally) while working 2.5 billion hours for 5.9 rate per million.

CORPS OF ENGINEERS new military construction projects reported 57 disabling injuries to civilian employees in December, as compared with 65 in November - a 12 percent reduction. Exposure, on the other hand, declined almost a million hours - 23 percent - to a new low of 3.0 millions with the result that the rate went to 18.7. The 1945 record of this reporting agency, though marred by a steady upward movement of rates which started back in April and became sharply higher after V-J Day, was 18 percent better than 1944 and 35 percent improved over 1943. New military construction reached its peak earlier than most of the other supply programs and, therefore, the employment decline was felt as early as 1943 becoming very pronounced in 1944 and 1945 with new lows being established each month after V-J Day. Belated reporting by personnel losing employment through closing of projects may be contributing to the currently higher Engineer rates. Of the 13,572 civilian persons injured on new military construction projects since January of 1943, 332 were killed. During this period the exposure was 1.1 billion hours and the three-year rate 12.3 injuries per million.

CHEMICAL WARFARE SERVICE INSTALLATION civilian employees had 20.9 injuries per million hours worked in December - up 140 percent from the 8.7 November rate. Hours of work again declined in December to a new low of 1.0 million, although the sharp rise in rate was traceable principally to the adverse experience of two installations. One of these - a depot - accounted for fully a fifth of the month's injury total while working but 7 percent of the hours; the other - an arsenal - accounted for almost half of the injuries and but one-third of the hours. While there has been some marked fluctuation in Chemical Warfare 1945 rates, the number of injuries involved have been relatively few - the ever lessening hours of work being the major contributor. This reporting agency showed the highest rate of improvement over the year - 69 percent from 1943 to 1944, 30 percent from 1944 to 1945, and 78 percent from 1943 to 1945. The relatively high rates prevailing among Chemical Warfare installations in 1943 must be considered, however, when evaluating these percentages. Thus, the 20.1 three-year rate (the highest for all reporting agencies) may possibly be a more accurate measure of performance. During the past 36 months civilian employees worked 145.0 million hours and had 2,937 disabling injuries of which only 39 were fatal.

TRANSPORTATION CORPS injury rate for civilian employees engaged in other than stevedoring work at the seven ports of embarkation (Port B was inactivated during October) was 8.1 injuries per million hours worked in December. This compared with the November figure of 7.8. Despite the 4 percent current rise, the December rate remained well below the rate-levels that obtained early in the year. On the other hand, contract stevedores were

injured with less frequency in December than in any previous month in 1945 - 31 injuries for each million hours worked. The November rate was 34.7.

On a broader basis - the whole year 1945 - substantial reductions were made in the rates for both categories of workmen. This was especially significant in view of the high level of activity maintained from January through July - the first sharp break in tomnage handled occurring in August. This was particularly evident among contract stevedores whose rate was 55.8 injuries per million in January. No contract stevedore data are available prior to January 1945. Therefore, excluding this category of workmen, the 1945 Transportation performance resulted in a 26-percent reduction in rate from 1944 (itself a record year with a 30-percent rate reduction from 1943) and a 1943-1945 rate decrease of 49 percent. During the 1943-1945 three-year period, 8,338 civilian employees engaged in other than stevedoring were disabled during the one-half billion hours of work. This includes 70 fatal injuries. During 1945 contract stevedores worked approximately 47 million hours and suffered 2,183 disabling injuries, 15 of which resulted in death.

Due to the special hazards involved at ports of embarkation possibly the best measure of performance is found in a comparison of the measurement tonnage handled per injury. In 1943 approximately 7,500 measurement tons per injury were handled; in 1944 the tons per injury had climbed to approximately 18,000 and in 1945 to over 27,000 'January through August'). Thus, the tonnage per injury handled in 1945 had increased 280 percent over the 1943 figures.

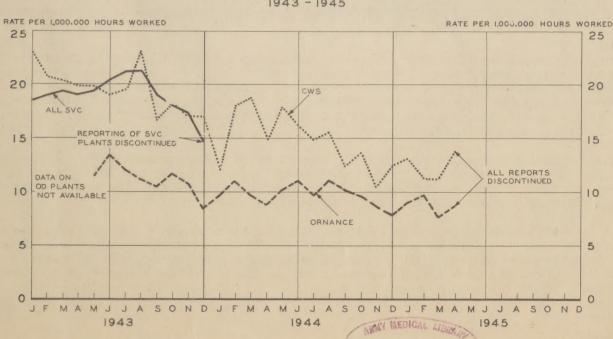
## INJURY RATES, CIVILIAN PERSONNEL AT ASF INSTALLATIONS, YEARS 1943, 1944, 1945

The year 1945 marked the end of reporting of accident data of privately-owned privately operated plants to The Provost Marshal General. The three-year period 1943-1945 presents an opportunity, however, to study the experience of a large segment of American industry during the war years.

During 1943, upwards of 11,000 plants assigned for safety supervision to the service commanders were reporting to The Provost Marshal General. These plants employed approximately 5 million persons - better than one-quarter of the total U. S. industrial employment. These employees worked a total of 12.4 billion hours in 1943 and sustained 235,960 disabling injuries for a rate of 19.1 per million hours. In January of 1943 - the first month of record - the rate was 18.5, or 25 percent higher than the national average of 14.8 for the year 1942. The accompanying chart shows that the trend was still upward, reaching a peak of 21.2 in August. There was a steady decline from this point to December (accident reporting for this class of facilities was discontinued thereafter) when the rate went below 15 injuries per million hours worked for a six-month decline of 43 percent.

Privately owned privately operated plants assigned for safety supervision to the Chiefs of Chemical Warfare and Ordnance reported their accident experience throughout 1943, 1944, and for four months of 1945 - reporting being discontinued on 1 May.

# CIVILIAN INJURY RATES: SvC, OD, AND CWS FACILITIES 1943-1945



MACHINETON, D. C. U.S.

In 1943, Chemical Warfare facilities worked a total of 88.8 million hours and had 1,772 injuries for a rate of 19.3. By the end of 1944 this rate had been reduced 30 percent and by the end of April 1945 an additional 6 percent. The 1944-1945 average monthly employment remained practically unchanged from the 1943 figure of 7.3 million hours.

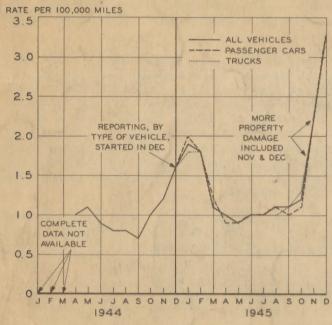
In 1943 Ordnance facilities worked a total of 199.4 million hours in 8 months (data prior to May not available) and had 2,206 injuries for a rate of 11.1. By the end of 1944 this rate had been reduced 11 percent and by the end of April 1945 an additional 12 percent. Ordnance employment dropped from a 1943 monthly average of 25 million hours to 19 in 1944 and 12 in 1945.

#### MOTOR VEHICLE ACCIDENT RATES, ALL ASF INSTALLATIONS, DECEMBER 1945 AND YEARS 1944, 1945

The accompanying chart and table show that ASF motor vehicle accident rates have been very erratic throughout the two years during which records have been maintained. This condition is traceable to the wide variance in reporting efficiency at installations - very few keeping records on all property damage cases resulting from vehicle accidents.

Motor vehicle accident procedures were revised late in 1944 to clarify all features of the vehicular reporting program and to assure uniform interpretation of definitions, particularly those involving reportable accidents. As a result ASF rates reached a new peak during the winter months, but still were far below the national averages which increase to abnormal proportions for these months.

#### ASF MOTOR VEHICLE ACCIDENT EXPERIENCE



|  | Numbe<br>Mil  | es   | Rate per Hundred-Thousand Miles   |  |  |   |   |   |   |  |  |  |
|--|---|--|---|--|--|---|---|---|---|--|--|--|
| Reporting<br>Agency  | Dec 1   |  | De  | c 194  | 5  |   | 1944  |   |   |  |  |  |
|  | Ta/   | PC b/  | T   | PC   | All  | T   | PC  | All   | All o/  |  |  |  |
| TOTAL  | 303.2   | 171.0  | 3.3   | 3.3  | 3.3  | 1.4   | 1.4   | 1.4   | 1.1   |  |  |  |
| ORDNANCE   | 44.9  | 24.8   | 1.4   | 1.3  | 1.4  | 0.7   | 0.7   | 0,7   | 0.6   |  |  |  |
| ENGINEERS  | 3.3   | 10.2   | 1.8   | 1.6  | 1.6  | 0.7   | 0.9   | 0.8   | <u>a</u> /  |  |  |  |
| CHEMICAL WARFARE   | 5.8   | 2.7  | 1.7   | 0.4  | 1.31   | 1.2   | 1.0   | 1.1   | 1.7   |  |  |  |
| TRANSPORTATION   | 38.3  | 20.4   | 6.0   | 5.8  | 5.9  | 4.2   | 2.9   | 3.7   | 2.6   |  |  |  |
| SERVICE COMMAND First Second Third Fourth Fifth Sixth Seventh Eighth Minth | 210.9<br>8.1<br>21.2<br>16.0<br>41.1<br>14.8<br>17.7<br>20.2<br>28.5<br>38.4<br>4.9 | 112.9<br>5.9<br>13.4<br>9.2<br>19.6<br>8.8<br>13.4<br>11.9<br>9.2<br>17.8<br>3.7 | 3.3<br>5.8<br>4.8<br>4.7<br>2.1<br>4.5<br>3.2<br>2.2<br>1.9<br>2.8<br>9.4 | 3.6<br>7.8<br>2.3<br>4.1<br>2.1<br>3.0<br>4.3<br>3.4<br>3.7<br>7.3 | 3.4<br>6.7<br>3.8<br>4.5<br>2.1<br>3.7<br>2.6<br>2.2<br>3.5<br>8.5 | 1.3<br>1.4<br>2.2<br>1.6<br>0.9<br>1.2<br>1.5<br>1.1<br>1.0<br>1.2<br>2.2 | 1.5<br>1.5<br>1.6<br>1.8<br>1.2<br>1.0<br>2.2<br>1.1<br>1.0<br>1.7<br>2.3 | 1.3<br>1.4<br>2.0<br>1.7<br>1.0<br>1.2<br>1.8<br>1.1<br>1.0<br>1.4<br>2.2 | 1.0<br>0.9<br>1.5<br>0.9<br>0.6<br>0.8<br>1.3<br>1.2<br>1.0<br>1.4<br>1.0 |  |  |  |
| a/Trucks. b/Passenger cars. c/Breakdown by type not available.             |   |  |   |  |  |   |   |   |   |  |  |  |

In an effort to uncover the large proportion of minor property damage accidents still going unreported the entire reporting procedures were overhauled during 1945 and in November, for the first time since the inception of motor vehicle accident reporting, rates began to approach the expected normal frequencies. The composite rate for December of 3.3 is the result of all reporting agencies, with the possible exception of Chemical Warfare, reporting on the revised basis.

Despite incomplete reporting ASF rates have followed a standard seasonal pattern of higher rates during the winter months and lower rates in the summer. The fact that rates continued downward from June to September in 1944 and upward during the same period in 1945 was principally the result of more accurate reporting during the latter period.

Although it is known that Transportation, and the Third, Fourth, and Sixth Service Commands and MDW are engaged in vigorous motor vehicle accident prevention programs, only when complete cause analysis is made of the minor damage accidents now being reported in increasing numbers will more decisive steps be taken toward remedial measures by all reporting agencies.

LITHOMOUNT PAMPHLET BINDER

Manufactured by GAYLORD BROS. Inc. Syracuse, N. Y. Stockton, Calif.

